#### INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 2004/050106

# A. CLASSIFICATION OF SUBJECT MATTER

IPC7: H05K 1/02, H04B 10/00, G02B 6/43
According to International Patent Classification (IPC) or to both national classification and IPC

#### B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

#### IPC7: H05K, H04B, G02B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

### SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

#### EPO-INTERNAL, WPI DATA

#### C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|-----------|---|-----------------------|
| X         | PATENT ABSTRACTS OF JAPAN vol, 2000, no. 15, 6 April 2001 (2001-04-01) & JP 2000 352634 A (NEC CORP) 19 December 2000 (2000-12-19) abstract and figures | 1-2,6-7,12            |
| A         |   | 3-5,8-11,13           |
| <b>X</b>  | PATENT ABSTRACTS OF JAPAN vol. 2003, no 08, 6 August 2003 (2003-08-06) & JP 2003 098399 A (KONICA CORP), 3 April 2003 (2003-04-03) abstract and figures | 1,6,12                |
| A         |   | 2-5,7-11,13           |

| X | Further documents are listed in the continuation of Box C. |
|---|--|
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See patent family annex.

|  | categories o |  |
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|  |              |  |
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- document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- document referring to an oral disclosure, use, exhibition or other
- document published prior to the international filing date but later than the priority date claimed
- later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

0 4 -11- 2004

3 November 2004

Authorized officer

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| ategory*   | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |  |
|------------|---|-----------------------|--|
| A          | PATENT ABSTRACTS OF JAPAN vol. 2000, no. 22, 9 March 2001 (2001-03-09) & JP 2001 141965 A (CANON INC), 25 May 2001 A (CANON INC) abstract | 1-13                  |  |
| x          | US 3628039 A (EUGENE V. OCHS ET AL), 14 December 1971 (14.12.1971), column 1, line 45 - line 51; column 1, line 66 - column 2, line 49    | 1-2,6-7,12            |  |
| <b>A</b> . |   | 3-5,8-11,13           |  |
| X          | US 6396968 B2 (ULF PILLKAHN), 28 May 2002<br>(28.05.2002), column 1, line 33 - column 3,<br>line 40                                       | 1,6                   |  |
| A          |   | 2-5,7-13              |  |
|            |   |                       |  |
|            |   |                       |  |
|            |   |                       |  |
|            |   |                       |  |

# INTERNATIONAL SEARCH REPORT

International application No.

01/10/2004

PCT/FI 2004/050106

| US | 3628039 | A  | 14/12/1971 | NONE                                | . · .                    |
|----|---------|----|------------|-------------------------------------|--------------------------|
| US |         | B2 | 28/05/2002 | DE 10106623 A,C<br>US 20010036331 A | 13/09/2001<br>01/11/2001 |

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